

Mycorrhiza usage against Phytophthora in strawberry

It appears possible to provide unrooted strawberry cuttings in potting soil, which have no mycorrhiza fungi in their roots, with the protecting mycorrhiza fungi (species: *Rhizophagus irregularis*), originating from the EU project REFERTIL. This became apparent from the research carried out by researchers Joeke Postma and Marieke Förch from Wageningen University and Research (WUR). The added mycorrhiza sort *Rhizophagus* was able to reduce the phytophthora infection by around 50%. This is a promising way to prevent stem root rot in strawberry.

Some positive characteristics are attributed to mycorrhizas such as making phosphate available for the plant or the prevention of diseases through competition. However, mycorrhiza fungi do not occur in substrate in which plants did not grow before, such as in clean potting soil. Even when adding 10% of soil which comes from an arable plot does not ensure of mycorrhizas in the roots.



The addition of mycorrhiza fungi to the substrate

In a test two mycorrhiza species (*Rhizophagus irregularis* and *Glomus etunicatum*) originating from the EU project REFERTIL were added to unrooted Elsanta cuttings in potting soil. In the mycorrhiza species *Rhizophagus* 40% of the strawberry roots contained mycorrhizas after 6 weeks. In the mycorrhiza species *Glomus* only 10% of the roots were occupied with mycorrhizas. In the control strawberry not a single root was colonized with the fungi.

Less stem root rot

One part of the strawberry plants were infected with *Phytophthora cactorum*, which causes stem root rot in strawberry. The added mycorrhiza species *Rhizophagus* was able to reduce the *Phytophthora* by approximately 50% compared to the control without mycorrhiza. The number of brown roots as well as the number of plants with internal symptoms of stem root rot was less. The other mycorrhiza species was not really effective.

Which mycorrhiza sorts are the most effective?

The results found need to be further tested under practical conditions.

The repeatability, the mode of application and under which circumstances the mycorrhizas are effective need to be thereby considered. It is also important to know which mycorrhiza species are the most effective and if the application [of mycorrhizas] is economically feasible.

Source Wageningen UR.

Translation

Date of original publication: 16-12-2014